CDC FluView Weekly Report

National and Regional Level Outpatient Illness and Viral Surveillance

Application Quick Reference Guide – October 2012

Introduction

This Quick Reference Guide is intended to provide an overview of the outpatient ILI and viral surveillance systems and explain the available features and use of the "National and Regional Level Outpatient Illness and Viral Surveillance" web application.

This application is part of the CDC FluView report, which provides weekly influenza surveillance information in the United States. This application was developed to improve communication about influenza with the public health community, clinicians, scientists, and the general public. This application is added to the series of dynamic visualizations that allow internet users to access influenza information collected by CDC's monitoring systems. CDC's FluView report is available at http://www.cdc.gov/flu/weekly/.

About the Data

Viral Surveillance — Approximately 80 U.S. **World Health Organization (WHO) Collaborating Laboratories** and 60 **National Respiratory and Enteric Virus Surveillance System (NREVSS)** laboratories located throughout the United States participate in virologic surveillance for influenza. All state public health laboratories participate as U.S. WHO collaborating laboratories along with some county public health laboratories and some large tertiary care or academic medical centers. Most NREVSS laboratories participating in influenza surveillance are hospital laboratories. The U.S. WHO and NREVSS collaborating laboratories report the total number of respiratory specimens tested and the number positive for influenza types A and B each week to CDC. Most of the U.S. WHO collaborating laboratories also report the influenza A subtype (H1 or H3) of the viruses they test and the age or age group of the persons from whom the specimens were collected. The majority of NREVSS laboratories do not report the influenza A subtype. Reports from both sources are combined and the weekly total number of positive influenza tests, by virus type/subtype, and the percent of specimens testing positive for influenza are presented in the weekly influenza update, FluView. A subset of the influenza viruses collected by U.S. WHO collaborating laboratories are sent to CDC for further characterization, including gene sequencing, antiviral resistance testing and antigenic characterization.

Outpatient Illness Surveillance — Information on patient visits to health care providers for influenza-like illness is collected through the **U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)**. ILINet consists of more than 3,000 outpatient healthcare providers in all 50 states, the District of Columbia and the U.S. Virgin Islands reporting over 30 million patient visits each year. Each week, approximately 1,800 outpatient healthcare providers around the country report data to CDC on the total number of patients seen and the number of those patients with influenza-like illness (ILI) by age group (0-4 years, 5-24 years, 25-49 years, 50-64 years, and ≥ 65 years). For this system, ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat in the absence of a knowncause other than influenza. Sites with electronic records use an equivalent definition as determined by state public health authorities.

ILI baselines:
The percentage of patient visits to healthcare providers for ILI reported each week is weighted on the basis of state population. This percentage is compared each week with the national baseline. The baseline is developed by calculating the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons and adding two standard deviations. Due to wide variability in regional level data, it is not appropriate to apply the national baseline to regional data; therefore, region-specific baselines are calculated.

Note: ILINet and WHO/NREVSS Collaborating Laboratory surveillance data are preliminary and subject to change as more data becomes available.

Health and Human Services (HHS) Regions and Census Divisions:

The map and data used in the National and Regional Level Outpatient Illness and Viral Surveillance web application is displayed by Health and Human Services (HHS) Regions and Census Divisions. The 10 HHS regions include:

HHS Regions	Jurisdiction
Region 1	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
Region 2	New Jersey, New York, Puerto Rico, and U.S. Virgin Islands
Region 3	Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia

Region 4	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee
Region 5	Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin
Region 6	Arkansas, Louisiana, New Mexico, Oklahoma, and Texas
Region 7	Iowa, Kansas, Missouri, and Nebraska
Region 8	Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming
Region 9	Arizona, California, Hawaii, and Nevada
Region 10	Alaska, Idaho, Oregon, and Washington

The Census Divisions are:

Census Division	**Jurisdiction**
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
Middle Atlantic	New Jersey, New York, Pennsylvania, Puerto Rico, and U.S. Virgin Islands
East North Central	Indiana, Illinois, Michigan, Ohio, and Wisconsin
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota
South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia
East South Central	Alabama, Kentucky, Mississippi, and Tennessee
West South Central	Arkansas, Louisiana, Oklahoma, and Texas
Mountain	Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, and Wyoming

Pacific	Alaska, California, Hawaii, Oregon, and Washington

Accessing the FluView Web-based Application

All FluView applications are accessible to the public on the World Wide Web. To access the National and Regional Level Outpatient Illness and Viral Surveillance web application open a web browser on your computer and go the following internet link:

http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html

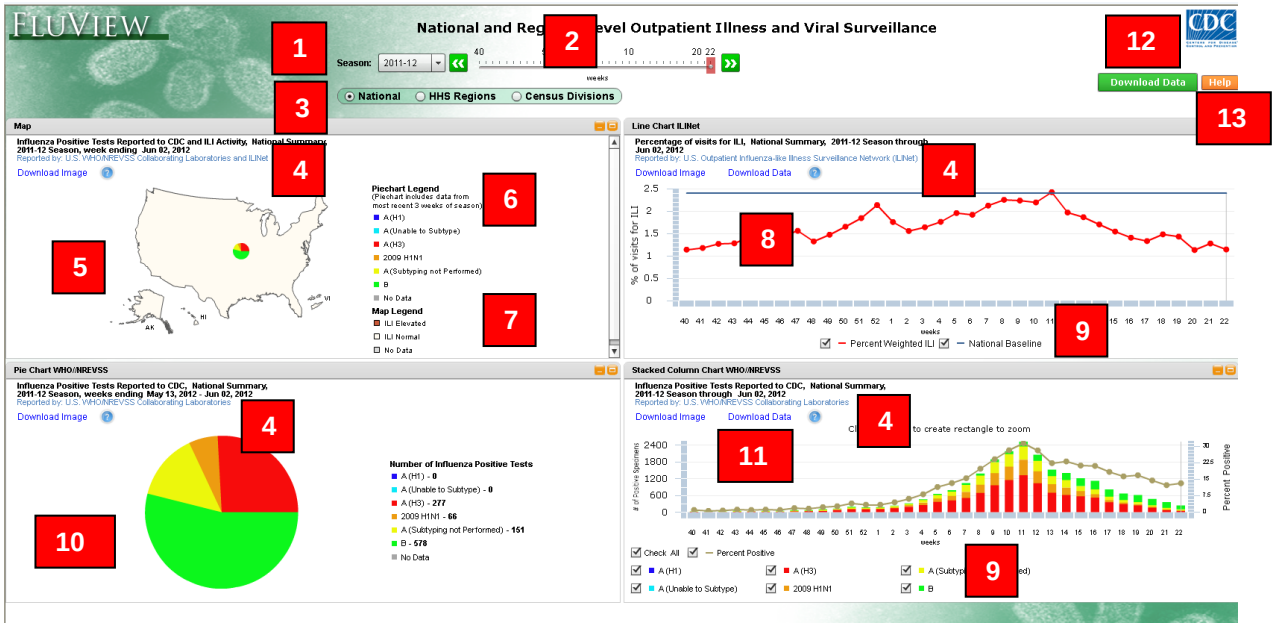
Application requirements:

- Internet Browser
  - Windows Internet Explorer 7 and later
  - Google Chrome
  - Mozilla Firefox
- Adobe Flash plug-in for internet browsers. This plugin can be downloaded at http://get.adobe.com/flashplayer/ .

Once the website is loaded, a disclaimer dialog box will appear. Please review the disclaimer for important reference information. Click “Ok” to continue the FluView web application. Clicking on Cancel will take you to the CDC FluView weekly Flu report home page - http://www.cdc.gov/flu/weekly/

Application Functions and Tool Overview

Below is an image of the default view of the National and Regional Level Outpatient Illness and Viral Surveillance web application. This interactive tool allows users to display and query information for current and previous flu seasons. The descriptions for each tool are listed below the application image.



1. **Influenza Season Selection Tool –** A drop down menu allows the user to choose which influenza season to display.

2. **MMWR Week Slider Bar** – Use the cursor to move the slider button across the selected time frame. The green and white arrows on either side of the slider bar also can be used to move the slider from one season to another.

3. **Region Selection Tool –** Allows the user to view the data at the national level, or by HHS Regions or Census Divisions.

4. **Download Image and Download Data Hyperlink –** To create a static image of the data displayed in your current view, click the “Download Image” hyperlink. The file download dialog box will appear providing the option of viewing the image, saving a copy to a local drive or discarding the image. To create a copy of the data in your current view, click the “Download Data”

hyperlink. You will be given the option to open or save the comma separated value (*.csv) file.

5. **Map** –The map component shows an overview of the data displayed in the application. The map will be colored based on the level of ILI activity (i.e. elevated or normal), and each region within the map will also be displayed with a pie chart showing the proportions of viruses that have been reported during the last 3 weeks of reports.

6. **Pie Chart Legend –** Shows the color breakdown for the influenza virus type and subtype information that is displayed in a pie chart on the map.

7. **Map Legend –** The map legend displays the fill colors that are displayed in the map to depict the level of ILI activity (i.e. elevated or normal)

8. **ILI Graph** – The ILI graph shows in red the weighted percent of visits to outpatient clinics due to ILI for each week. The blue line indicates the baseline for the selected season. ILI at or above this baseline level is considered to be elevated. The user can hover over the data-points to display the values.

9. **Graph Series Selection Tool** – The graph series selection tool allows the user to select which series he/she wants to view on the graph. For example on the stacked column chart if the user does not want to see the number of A (subtyping not Performed) they would simply uncheck the box next to A (Subtyping not Performed) in the graph legend.

10. **Pie Chart** – The pie chart shows the breakdown of virus type and subtype for the last three weeks during the given season, and for the selected region.

11. **WHO/NREVSS Bar Chart** – The bar chart shows the number of positive influenza tests by type and subtype by week in a stacked bar for the selected region. The percent of tests positive for influenza is indicated by a tan line. The user can hover over both the line and the bars to display the actual values.

12. **Download Data Button** – The Download Data dialog box will appear provide two options: clicking the first button, “Custom Download” enables you to customize the selection by selecting the data source, region type/regions and which seasons you would like data for. With the options selected click the Download Data button and a file download dialog box will appear. You will be given the option to open or save the comma separated value (*.csv) file.

13. **Help –** The Help Menu provides a detailed overview and describes the full functionality of the FluView Web application.